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POINCIANA PLAZA HOUSING ANNUAL GROUNDWATER MONITORING REPORT WITH TRANSMITTAL LETTER NAS KEY WEST FL

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TETRA TECH NUS

TETRA TECH NUS, INC.

AIK-01-0067

March 12, 2001

Project Number HK 7593 *via Electronic Mail*

Commander
Department of the Navy
SOUTHDIV NAVFACENGCOM
ATTN: Dudley Patrick (Code 1858)
P.O. Box 190010
North Charleston, South Carolina 29419-9010

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0032

Subject: Poinciana Plaza Housing Annual Groundwater Monitoring Report, Rev. 0, Naval Air Station, Key West, Florida

Dear Mr. Patrick:

I have enclosed the PDF file for the Poinciana Plaza Housing Annual Groundwater Monitoring Report, Rev. 0, Naval Air Station, Key West, Florida. The file is being distributed to the members of the NAS Key West Partnering Team via electronic mail for their convenience and to meet TtNUS's contractual obligations for CTO 0032. I am planning on receiving comments or concurrence on this document from the Partnering Team members within the next 30 days.

Please call me at (803) 649-7963, extension 345, if you have any questions regarding the enclosed report.

Sincerely,

C. M. Bryan
Project Manager

CMB:spc

Enclosure

c: Ms. Debbie Wroblewski (Cover Letter Only)
Mr. T. Ballard, EPA
Mr. J. Caspary, FDEP (Hard Copy)
Mr. R. Courtright, NAS Key West
Mr. R. Demes, NAS Key West
Mr. M. Perry/File
File: 7593-7.20.4

900 Trail Ridge Road, Aiken, South Carolina 29803
Tel 803.649.7963 Fax 803.642.8454
www.tetratech.com

POINCIANA PLAZA HOUSING
ANNUAL
GROUNDWATER MONITORING REPORT

Naval Air Station
Key West, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888
Contract Task Order 0032

March 2001

Rev. 0

AIK-01-0067
Rev. 0

POINCIANA PLAZA HOUSING
ANNUAL
GROUNDWATER MONITORING REPORT

FOR

NAVAL AIR STATION
KEY WEST, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
Tetra Tech NUS
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0032

March 2001

PREPARED UNDER THE SUPERVISION OF:

CHUCK BRYAN
TASK ORDER MANAGER
TETRA TECH NUS
AIKEN, SOUTH CAROLINA

APPROVED FOR SUBMITTAL BY:

DEBBIE WROBLEWSKI
PROGRAM MANAGER
TETRA TECH NUS
PITTSBURGH, PENNSYLVANIA

POINCIANA PLAZA HOUSING
ANNUAL GROUNDWATER MONITORING REPORT

Tetra Tech NUS, Inc. (TtNUS) has performed groundwater monitoring at Poinciana Plaza Housing, a Base Realignment and Closure (BRAC) site at Naval Air Station (NAS) Key West, Florida on behalf of the U.S. Naval Facilities Engineering Command, Southern Division since February, 1998. This document was prepared under the Comprehensive Long-Term Environmental Action, Navy (CLEAN) contract number N62467-94-D-0888, Contract Task Order (CTO) 0032. This report summarizes the sampling results from four quarters of monitoring that took place from April 2000 to January 2001.

Monitoring Objectives. The objective of the quarterly groundwater monitoring program at Poinciana Plaza Housing is to monitor arsenic levels in well GO2MW-01 at Poinciana Plaza Housing. The monitoring program is presented in the Sampling and Analysis Plan for Poinciana Housing Groundwater Monitoring (TtNUS, 2000). Groundwater samples were analyzed for arsenic on a quarterly basis.

First Quarterly Monitoring. On April 19, 2000, an unfiltered groundwater sample was obtained from well GO2MW-01, using the low-flow sampling technique. Arsenic was detected at a concentration of 1,210 micrograms per liter (μg/L), which is in excess of the 50 μg/L action level.

Second Quarterly Monitoring. On July 22, 2000, an unfiltered groundwater sample was obtained from monitoring well G02MW-01, using the low-flow sampling technique. Arsenic was detected at a concentration of 210 μg/L. This level was 1,000 μg/L below the arsenic result from the first quarterly monitoring event, but still above the action level of 50 μg/L.

Third Quarterly Monitoring. On October 9, 2000, an unfiltered groundwater sample and duplicate were obtained from monitoring well G02MW-01. Arsenic was detected at an average concentration of 850.5 μg/L, which is in excess of the action level of 50 μg/L. Prior to the sampling event, approximately 220 gallons of water were pumped from well G02MW-01 on October 4, 2000, in an attempt to obtain additional information relating to the source of the arsenic.

Fourth Quarterly Monitoring. An unfiltered groundwater sample and duplicate were obtained from monitoring well G02MW-01 on January 23, 2001. An average arsenic concentration of 248.5 μg/L was detected, which is in excess of the action level of 50 μg/L. Prior to the sampling event, approximately 220 gallons of water were pumped from well G02MW-01 on January 22, 2001, in an attempt to obtain additional information relating to the source of the arsenic.

Included in Attachment A of this report are copies of the sample log sheet, chain of custody containing the Poinciana Plaza Housing samples GO2-MW-01-012301 and G02-DUP-01, and laboratory results for both samples from the fourth quarterly monitoring event.

Conclusions. Arsenic results from the four quarterly monitoring events are inconsistent, ranging from 210 to 1,210 µg/L. Figure 1 shows all historical results of sampling events conducted to monitor arsenic in the groundwater at monitoring well GO2MW-01. Figure 2 shows the location of the subject monitoring well with respect to the layout of the Poinciana Plaza Housing Complex and arsenic exceedances in groundwater during the past year of monitoring.

Based on the results of the four quarterly monitoring events, TtNUS recommends that future monitoring be conducted on an annual basis. However, if the arsenic level in well GO2MW-01 falls below the action level during a yearly event, TtNUS recommends again conducting quarterly monitoring to determine if consistent results will be achieved during subsequent quarters, so that site closure can be expedited.

REFERENCES

TtNUS (Tetra Tech NUS, Inc.), 2000. *Sampling and Analysis Plan for Poinciana Housing Groundwater Monitoring*, Revision 1, Naval Air Station, Key West, Florida, April.

ATTACHMENT A